Fidler Bridge
Carrying County Highway 45
Over the Iroquois River
Watseka vicinity
Iroquois Township
Iroquois County
Illinois

HAER No. IL-122

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
Department of the Interior
Denver, Colorado 80225-0287

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HISTORIC AMERICAN ENGINEERING RECORD
FIDLER BRIDGE
HAER No. IL-122

I. INTRODUCTION

Present Location:	Iroquois County Highway 45 Spanning Iroquois River Two miles north and three miles west of Watseka, Illinois
USGS Quadrangle:	Crescent City, Illinois Latitude 40°-48.73'; Longitude 87°-48.41' UTM 16.646000.1510700
Inventory Data:	County Highway 45 Fidler Bridge Illinois Structure No. 038-4204 NE 1/4 of Sec 22, T27N, R13W Iroquois County
Date of Construction:	1896, Bridge Name Plate, County records
Owner, Custodian:	Iroquois County Highway Department
Present Use:	Vehicular bridge programmed for replacement.
Significance:	This two-span bridge, located at an historic crossing over the Iroquois River, includes a 200' through Pennsylvania truss built by the Clinton Bridge and Iron Works, one of two spans in Illinois known to have been built by this Clinton, Iowa builder, and one of three of this type listed in the Illinois Bridge Inventory, the others being at L'Erable, 1903, and Spring Valley, 1934. Pennsylvania trusses were a popular long span bridge type from the late 19th century into the 1930s. Few examples of this truss are known to exist today on American highways, another metal truss type vanishing from the landscape.
Historian:	John B. Nolan, S.E. August 3, 1995

II. HISTORY

The Iroquois River is a broad, slowly flowing stream in northeastern Illinois. Originating in Indiana, it meanders westwardly past Watseka, thence northerly to join the Kankakee River at Kankakee some twenty miles distant. The surrounding flat plain, in ancient times the vast Kankakee swamp basin, a "wet prairie" with considerable timber, has been drained and is extensively cultivated. A few artesian wells, formerly abundant, continue to flow. The stream, although navigable in the early days, remained a significant barrier to early settlers travelling overland.[1]

The earliest Euro-American to arrive in the area was Gurdon S. Hubbard, an Indian trader employed by the American Fur Company. In 1822 Hubbard brought a boat of considerable size from Mackinaw Island, crossed the portage to the Des Plaines and followed the Kankakee and Iroquois rivers to present day Watseka, where he established his post. In September 1851, George and Harriet Fidler came in a covered wagon, leading a cow and the family dog, from Tippecanoe County, Indiana, to settle in the Plato area, in the northern tier of the township. In the early 1880s, David Fidler, one of their five surviving children, purchased a farm near the established ferry north of Watseka.[2]

At a special meeting in March 1897 the Iroquois County Board of Supervisors adopted the recommendations of the committee reporting on the building of the bridge over the Iroquois River at Fidler's Ferry:

"Board of Supervisors, March term. March 16, A.D. 1897,
Mr. Chairman and gentlemen of the Board of Supervisors:

"Your committee to whom was referred the building of a bridge across Iroquois River at Fidler's Ferry in the township of Iroquois would beg leave to submit the following report on the matters before them.

"Your committee met with the commissioners at the bridge site June 16, 1896 and decided on building an iron bridge of 200 feet span and appointed a meeting of said committee to be held at the court house in Watseka July 17, 1896, and on motion of B.H. Skeels, A.E. Merritt was chosen chairman of said committee, at which time bids would be received for construction of a bridge. The proper notice being posted by the town clerk of said Iroquois township and on that day sixteen different firms filed bids and plans for the bridge, submitting twenty-five different plans. Your committee after careful examination of plans, we (sic) selected three of the plans and had them examined by W.R. Woodruff, engineer at Kankakee, and he recommended that the plans furnished by the Clinton Bridge and Iron Co. of Clinton, Iowa, were by far the best and strongest and the committee accepted said plans and made contract with said company for the bridge. One span of 200 feet long with iron abutments and wings for $4898, which contract and plans are on file with the town clerk of Iroquois township. And on same day and date we let contract for grading the approaches to the bridge to Otto Butzow and John Watson for 5-3/4 cents per cubic yard.

"And on January 11, 1897, we, your committee met at the bridge and after careful inspection we agreed to accept and also the grading. Total for 200 foot span iron bridge and abutments $4898; county one-half $2449. For grading 4813 yards at 5-3/4 $276.74; county one-half $138.37. Extra work on grade $25.00; county one-half, $12.50. For extra ground bought $10.00; county one-half, $5.00. For services of engineers $32.50; county one-half, $16.25. Total cost to county $2621.12; to be paid as follows: Clinton Bridge and Iron Co. of Clinton, Iowa, $2449; Otto Butzow and John Weston $155.87, W.R. Woodruff, civil engineer, $12.50; C.G. McDougal $3.75. Total $2821.12.

"We, your committee, recommend the county clerk issue orders to the different parties for amounts as shown.

"All of which is respectfully submitted.

A.E. Merritt, Chairman
B.H. Skeels
W.J. Webb"[3]

The bridge plan and bid documents of the Clinton company are on file in the Watseka City Library. The plan consists of a single blueprint sheet measuring 15"x 8", showing an elevation view, one-half marked with stresses in main members, the other half marked with square inches of members. The plan view shows the upper bracing on half and the lower bracing on the other half. Some revisions have been made to the sheet with a red pencil. The original design live loading has been changed from Theodore Cooper's class A2 to T.A.L. Waddel's A&B - including a steam road roller with a total weight of 30,000 pounds. In a handwritten letter, F.H. Howe, agent for the Clinton Bridge and Iron Company, submitted four bids, including an alternate with masonry abutments.

At the request of the committee, W.K. Woodruff, City Engineer of Kankakee, reviewed plans submitted by the Wabash Bridge Company, the Canton Bridge Company of Bloomington (Illinois) and three plans of the Clinton Bridge [and Iron Works] Company. Referring to his twenty years experience, Mr. Woodruff recommended [Clinton] Plan #2 with "tubular steel piers", and advised driving five piles below low water in each tube. Due to the low gradient of flow in the Iroquois River the need for masonry abutments was deemed unnecessary.[4]

On May 10, 1899, a contract was awarded to Chesley Brothers of Danville to correct problems due to pressures on the south abutment pushing the bridge against the north abutment. At that time the bridge was raised and moved southerly two feet to its original position, a south approach span and low abutment bent were added and the original south tubes plumbed and tied to anchors in the south bank. The cost of this project was $825.89.[5]

The bridge provides the only river crossing within the township. County Highway 45 is a north-south and generally secondary section-line road through the county which serves local needs but provides little advantage for accessing larger communities. Illinois State Highway 1,

the historic Dixie Highway, three miles to the east, furnishes convenient access from the area northeast of the bridge to Watseka, the county seat.[6]

The riding surface of the county highway is stabilized stone, narrow but smooth. Curves at the abutments and a bridge load restriction limit traffic to 10 mph and 4 tons. The bridge is posted for one lane of traffic.

III. THE BRIDGE

A. The Bridge Type

The main span of the Fidler bridge is a simple span through Pennsylvania truss, an advanced type of Pratt truss frequently used by bridge designers for longer spans from the closing years of the 19th century into the 1920s.[7]

Development of trusses of wrought iron in the first half of the nineteenth century and, later, steel in the second half, contributed to the rapid expansion of railroads, settlement and industrialization of a growing America. Before 1850 early Howe and Pratt trusses using the panel system and pinned connections were practical and cost effective bridges for spans up to 150'. Members of early trusses were assembled with rivets in one of the hundreds of small fabrication shops, transported to the site by railroads and wagons and erected by a crew of local laborers under the direction of the manufacturer's agent. There were few standards, and many companies developed and patented designs which allowed them to build unique, if not better, bridges.[8]

The demands for America's railroads for longer bridges kept the pressure on engineers to break creatively through the barriers of standard Pratt trusses. Since the economical height for a truss is between one-fifth and one-seventh of the span length, it follows that panel lengths for longer span bridges must be lengthened for diagonal bracing to work most effectively. To overcome the need for larger floor beams and stringers to fit increased panel lengths, several designs were tried, including the Whipple truss. Albert Fink developed tbe Baltimore truss in which panels are subdivided to provide intermediate bracing to support the floor beams and brace the top chord. The first Baltimore was built in 1871 and afterwards used extensively by the Baltimore and Ohio Railroad. In 1874 the Pennsylvania Railroad built the first Pennsylvania truss, similar to the Baltimore but having inclined upper chords, a third version of the reliable Pratt type. The Pennsylvania truss is sometimes called, in error, a Pettit truss.[9]

A 1905 textbook promotes the Pennsylvania truss as the culmination of "...a half century of development or evolution of feature arrangement and construction details which have been found to be the most advantageous...", and concludes, "This form of simple truss appears to possess the highest degree of economy for long spans, and it has been extensively built in the United States." The text lists

57 single long span pinned railroad bridges, 42 of which are Pennsylvania trusses.[10]

A plaque has been recently placed at Chamberlain, South Dakota, marking the sole survivor of the first five highway bridges built in South Dakota to span the Missouri River. Of the five bridges built between 1924 and 1927, four were riveted Pennsylvania trusses. The surviving bridge, still in use and a popular tourist attraction, was saved from replacement by concerned local citizens.[11]

Assembly details of the Fidler Bridge are functional and adequate, lacking the corner ornamentation often embellishing other bridges of this period. This structure is one of the few remaining trusses in the Illinois historical inventory which was designed, fabricated and erected by independent bridge companies.[12]

There are no name plates on the bridge, the last having disappeared within recent months. A surviving photograph shows a rectangular plate bordered with scrolls and fleurs-de-lis.

1896
CLINTON BRIDGE
&
IRON WORKS.
BUILDERS
CLINTON, IOWA.

B. The Manufacturer

The Clinton Bridge and Iron Works

The parent company of the Clinton Bridge and Iron Works began in 1868 as a stock company formed as a construction firm in Clinton, Iowa. Buildings were built, but the venture did not prosper until purchased and reorganized by Artemus Lamb in 1875 as the Clinton Bridge Company. A few years later the neighboring Union Works, founded in 1868 by Abram P. Hosford, were merged into the company. An 1878 letterhead advertises "Iron, Combination and Wood Bridges" with "Iron Shops in Cleveland, Ohio" and "Wood Shops in Clinton, Iowa." Advertisements from 1879 to 1882 identify the Cleveland shop as the Novelty Iron Works.[13]

An article written in 1879 states:

> "The Clinton Bridge Company...has not only furnished a multitude of the most satisfactory and compact bridges, but has also constructed some of the most scientific and elaborate bridges in the northwest. The Engineers' and draughting rooms are located in the central block on First Street, and the shops immediately adjacent on Fourth avenue. The latter are elaborately planned, both in size and arrangement for preparing spans long enough for the longest needed wooden bridges. It is fitted with the largest machines of the kind in the northwest. A span, 150 feet in length can, if necessary, be turned out in 24 hours.

"[Following several reorganizations]...the company has erected 267 structures of all kinds and combinations of iron trusses and arches...There is no kind of bridge from the grandest railroad span to one over a diminutive brooklet, but the company have put up in the most scientific and thorough manner; and their light but strong structures are everywhere taking the place of obsolete rural bridges made of heavy morticed [sic] timbers, and the bottomless quagmires which creek fords become in wet weather.

"[In 1892 the Company was sold to the George E. Wilson family of Sterling, Illinois.] In 1947 another generation has taken over-...since 1945 the company has been associated with the gage Structural Company of Chicago and Midland Structural Steel co., of Cicero, Ill., the three forming Allied Structural Steel companies...to meet the needs the demands for office buildings, industrial plants and highway bridges, from fabrication to erection with precision and knowledge."[14]

The company closed several years ago. The Enviromental Protection Agency is currently reviewing the site for removal of coal tar residue.[15].

C. Biographical Notes

George E. Wilson, president of Clinton Bridge and Iron Works:

Mr. Wilson was born in England in 1847 and brought to the United States in 1856 by his father, who settled in the Rockford, Illinois area. After spending his early years on the family farm and in Union army service, he learned the foundry and machine business. Following a period of association with machinery firms in Beloit, Wisconsin, and Sterling, Illinois, he purchased the Clinton Iron Works in 1892. An undated, post World War II, biography mentions four sons, three connected with the Clinton office and one serving as the Pacific Coast agent of the company.[16]

J. C. Spencer, engineer, Clinton Bridge and Iron Works:

The Clinton Company plans for the Fidler Bridge, prepared in the fall of 1896, were signed by J. C. Spencer, Engineer-Iowa. The sole John C. Spencer of record, a son of George E. Spencer and Martha Wilcox Spencer, was born August 26, 1870, and would have been sixteen years old at the time. George Spencer, the father, identified as a man of large enterprise and industry, was a hardware merchant of Clinton and stock holder in the City Bank. Clinton City Directories for 1893 and 1899 list only two Spencers, George Spencer, the banker-father, and a John W. Spencer, a railroad employee.[17]

Watson K. Woodruff, consultant

A native of New York, Mr. Woodruff located in Kankakee in 1885 as acting Chief Engineer of the Indiana, Illinois and Iowa Railroad. An early job of land surveyor led him to the engineering profession with a speciality of railroad construction. He was employed by two railroads before moving to Kankakee. In 1911 He served as City Engineer of Kankakee.[18]

D. Structure Description[19]

For a schematic sketch of the Fidler truss, prepared by Boyer Engineering, Ltd., see page 16.

Two Spans, total length 222.4'.

1. South approach span, approximately 22' long, multi-beam bridge, nine stringers 8"x4" WF. South end, abutment bent; north end supported on I-beam 15"x5" supported on WF beam pedestals mounted on tops of pier tubes. The deck is a continuation of the main truss deck. The approach span lacks historical significance.
2. Main span, through Pennsylvania truss; steel. Length 200'-0", six (6) panels subdivided or twelve (12) spaces at 16'-8". Distance center to center of trusses 17'-2". Clear width between trusses 15'-10". Height between upper and lower chord centerlines: U1L1 19'-0", U2L2 25'-0", U4L4 30'-0". Clear height above the roadway at portal 11'-7".

Truss details are symmetrical about U6L6, truss centerline.

Inclined end posts and upper chords:
Two channels 12"x3", with 16"x1/4" continuous top plate, Single lacing on bottom, 2"x1/4" at 16" centers.

Lower chords:
L0-L1, L1-L2 two eyebars 4"x3/4"
L2-L3, L3-L4 two eyebars 4"x1"
L4-L5 two eyebars 4"x1-1/4"
L5-L6 two eyebars 4"x1-3/8"

Vertical Members:
U1-L1 hip vertical, two eyebars 1-3/4"x7/16".
U2-L2, U4-L4, U6-L6 immediate posts, two channels 7"x2", webs normal to roadway, o to o of toes 10-1/4", single lacing 1-3/4"x1/4" at 8" alternate centers each side.
M3-U3, M5-U5 sub or vibration posts, laced web, approximately 11" back to back of angle, two flanges of two angles each, 2"x2"x1/4"; interior lacing 1-1/2"x3/16" at 6" alternate centers.

Diagonals and counters:
U1-L2, main tie, two eyebars 3"x5/8".
U2-M3 main tie, two eyebars 3"x13/16".
M3-L4 main tie, two eyebars 3"x5/8".
M3-U4 counter, two rods 7/8" dia. with turnbuckle.
U4-M5 main tie, two eyebars 3"x5/8".
M5-L6 main tie, two eyebars 3"x1/2".
M5-U6 counter, one bar 1" square, loop ends, turnbuckle.
M5-L4 counter, two rods 7/8" dia., loop ends, turnbuckle.

Floor Beams:
Rolled, 15"x5-1/2"
L1, L3, L5, pin (end) plate hangers 7"x1/2", ten rivets.
L2, L4, L6, attached to intermediate posts.

Stringers (joists):
Six interior, 7"x3-5/8"
Two exterior channels, 7"x2", inside nailing strips 3"x6".

Bottom lateral cross-bracing:
L0-L1 rods 1-1/2" dia. ends threaded.
L1-L2 rods 1-3/8" dia. " "
L2-L3, L3-L4 rods 1-1/8" dia. "
L4-L5 rods 1" dia. " "
L5-L6 rods 7/8" dia. " "
Rods ends pass through floor beams, end nuts bear on cast iron bevelled washers.

End Bearings:
Standard fabricated plate assembly, roller nests at north abutment.

Pins:
L0 pins 3" dia.
Other L, M & U pins 2" dia.

Rivets:
3/4" dia. main members

Top lateral bracing:
Struts: U2-U6, laced web 12-1/4"deep, two 2"x2" flange angles, top and bottom lacing (approx. 1-1/2"x1/4") at about 45°.

Sway bracing: U2, U4, U6, lower struts two 3"x3" angles, stitch rivets; cross rods approx. 3/4" dia., turnbuckles and loop ends over stud pin.
Lower struts are approx. 13'-3" above floor, 2'-9" above lower chord centerline.

Top Lateral Cross Bracing: U1U2, rods 1-1/8" dia.; U2U3, U3U4, rods 1" dia.; U4U5, U5U6, rods 7/8" dia.; all ends threaded, end nuts bearing on U-plates bolted on top of top chord. (Plans show upper cross bracing spanning two subpannels).

Portals:
Modified "A" bracing, total slope height 6'-0", with knee braces approx. 4'-6"x3'-6"; built-up web members, 12-1/4" deep (depth of end post), flanges two 2"x2" angles top and bottom with interior single lacing (approx. 1-1/2"x1/4") and end plates; gusset connection plates at all joints.

Deck:
Transverse lower timber decking 3"x12"(full) at 14"; four 2"x12"(nominal) longitudinal tread planking each track.

Rail:
Two 2" dia. iron pipe, 23" and 37" above deck, passes through 2-1/2" holes in centerline of all vertical members; coupled continuously.

3. Substructure:

North abutment bearings rest on 4'-0" dia. tubes, an integral portion of the back wall and wing assembly consisting of 1/2" plates supported by 6" beam vertical piles. Wing wall length approx. 17'-0", set at 45°. Wing wall ends are anchored with 2'-0" tubes.

South truss bearings rest on 4'-0" dia. former abutment tubes now independent pier bearing tubes with cross-bracing. To correct tube tilting of approximately 2'-0" due to bank pressure in 1899, tops of the tubes were pulled back to the bank and secured with 1" dia. rods, loop ends about pins on steel collars near tube tops. Ends of rods in the bank are apparently attached to anchors in the bank. The added south abutment for the multi-beam first span appears to be a standard abutment bent of recent construction.

E. Present Condition And Modification

The bridge shows no indication of paint. Members are clean, an even rust patina providing surface protection. No pockets of member deterioration or loss of section were observed. A few missing or defective rivets have been replaced with bolts. The wearing surface is in satisfactory condition. The bridge is posted for four tons, one lane and ten miles an hour.

The Fidler Bridge looms above the wooded river banks and open fields in monumental and rusty dignity. Two fishermen continued fishing from the deck at the time of this inspection. Innovative design, efficient assembly, clean joints and light traffic has enabled this anachronism of early bridge design to survive for 98 years.

F. Ownership and Future

The Fidler Bridge is owned and maintained by the Iroquois County Highway Department. Due to the curved and narrow approaches, restricted width and low load carrying capacity, the County has programmed replacement of this structure at an early date. Although the bridge, because of age, assembly and location, is of more than usual structural and historical interest, its alignment and size make preservation for recreational purposes or historic record an unlikely alternative.[20]

IV. END NOTES

[1]Christopher J. Schuberth, A View of the Past, An Introduction to Illinois Geology. (Springfield: Illinois State Museum, 1986), pp. 40ff; The Way it Was in Iroquois County, Illinois, 1822-1976. (Watseka: Iroquois County Historical Society, 1976), pp. 2,3.

[2]H. W. Beckwith, History of Iroquois County, Illinois. (Chicago: H. H. Hill and Co., 1880) pp. 383, 396; The Way it Was, etc., p. 3; Gurdon Saltonstall Hubbard, Autobiography. (Chicago: Lakeside Press, 1911), p. 154; Standard Atlas of Iroquois County, Illinois. (Chicago: George A. Ogle and Company, 1904); Iroquois County Historical Society, Iroquois County History. (Dallas, Texas: Taylor Publishing Co., 1985), p. 396.

[3]Proceedings of the Iroquois County Board of Supervisors Meeting, Iroquois County Times. (Watseka) April 2, 1897; Proceedings etc., Watseka Republican. (Watseka) March 31, 1897.

[4]Loose documents, vertical files, Fidler Bridge. Watseka, Watseka Public Library; Portrait and Biographical Record of Kankakee County, Illinois. (Chicago: Lake City Publishing Co., 1893; reprint, Evansville, Indiana: Whipporwill Publications, 1986), pp. 315ff.

[5]Loose documents. vertical files.

[6]Map showing Marked Through Routes in Illinois. (Illinois State Highway Department, February, 1917).

[7]Mansfield Merriman and Henry S. Jacoby, A Text-book on Roofs and Bridges, Part I, 6th ed. (New York, John Wiley and Sons, Inc., 1920), pp. 221.

[8]David Plowden, Bridges: The Spans of North America. (New York: Viking Press, 1974), pp. 62, 67.

[9]Merriman, pp. 223ff; James L. Cooper, Iron Monuments to Distant Posterity (Indiana's Metal Bridges, 1870-1930). (DePauw University and others, 1987), pp. 68ff; Milo S. Ketchum, C.E., Structural Engineers' Handbook (New York, McCraw-Hill Book Company, Inc., 1924), p. 223.

[10]Merriman, p. 223.

[11]"Missouri River Bridges Gain Landmark Status," ASCE News,(New York, American Society of Civil Engineers, June 1995), p. 15.

[12]Illinois Department of Transportation, Historic Bridge Survey List. (Springfield: Bureau of Location and Environment, 1992), p. 3101m.1TP.

[13]Clinton County Historical Society, History of Clinton County, Iowa. (Clinton County American Revolution Bicentennial Commission, 1976), p. 127; P. B. Wolf, ed., History of Clinton County, Iowa. (Indianapolis: B. F. Bowen and Co., 1911), p. 372; Victor C. Darnell, Directory of American Bridge Building Companies, 1840-1898. (Washington D.C.: Society for Industrial Archaeology, 1984), pp. Introduction, 13; Letterhead, files of Clinton County Historical Society.

[14]Clinton Bridge Works. (Unidentified published Clinton History from files of Clinton County Historical Society), pp. 116, 117.

[15]Conversation and general information: Kim McAndrews, Reference Librarian, Clinton Public Library, June and July 1995.

[16]George E. Wilson. (Unidentified published Clinton History from files of Clinton County Historical Society), pp. 550ff; Clinton City Directory. (Publisher not known, 1896), p. 64.

[17]Portrait and Biographical Album of Clinton County, Iowa. (Chicago: Chapman Brothers, 1886), pp. 600, 601; Conversation with McAndrews.

[18]Biographical Record of Kankakee County, see [5].

[19]Nomenclature: Ketchum, p. 139; Vertical files; Site inspection by writer May 15, June 8, 1995.

[20]Jo McCord, "They're not Brooklyn's best, but you can own these bridges."(Kankakee Journal, Kankakee, January 30, 1995); Conversations with John C. Devine, Iroquois County Engineer, June 1995.

V. BIBLIOGRAPHY

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Mendenhall's New Road Map of Illinois. Cincinnati: C. S. Mendenhall, 1902.

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D. Newspapers

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McCord, Jo. "They're not Brooklyn's best but you can own these bridges." Kankakee Journal. Kankakee: January 30, 1995.

"Missouri River Bridges Gain Landmark Status." ASCE News. New York: American Society of Civil Engineers, June 1995.

E. Files

Clinton County Historical Society. Local history collection. (History of Clinton Bridge Works and biography of G.E. Wilson).

F. Library Resources

Clinton County Historical Society
P.O. Box 3135
Clinton, Iowa 52732
Telephone 319/242-6797
(Histories, letters).

Clinton Public Library
306 Eighth Avenue South
Clinton, Iowa 52732
Telephone 319/242-9115
(Histories)

Illinois State Historical Library
Old Capitol Square
Springfield, Illinois 62756
Telephone 217/524-6358
(Histories, newspaper microfilms)

Watseka Public Library
201 South Fourth Street
Watseka, Illinois 60970
Telephone 815/432-4544
(Original bridge plans and documents).

F. Conversations

Devine, John C., Iroquois County Engineer
Route 1 South, R.R. #3, Box 113D
Watseka, Illinois 60970
Telephone 815/432-4936

McAndrews, Kim, reference librarian
Clinton Public Library

Mrs. Elmer Luckritz, librarian
Clinton County Historical Society

G. Schematic Sketch of Fidler Truss

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Report prepared by:

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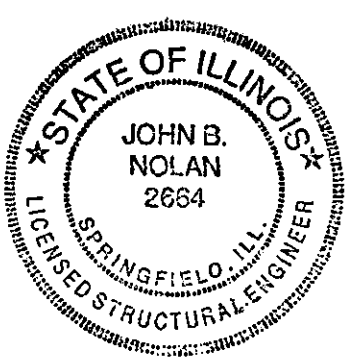
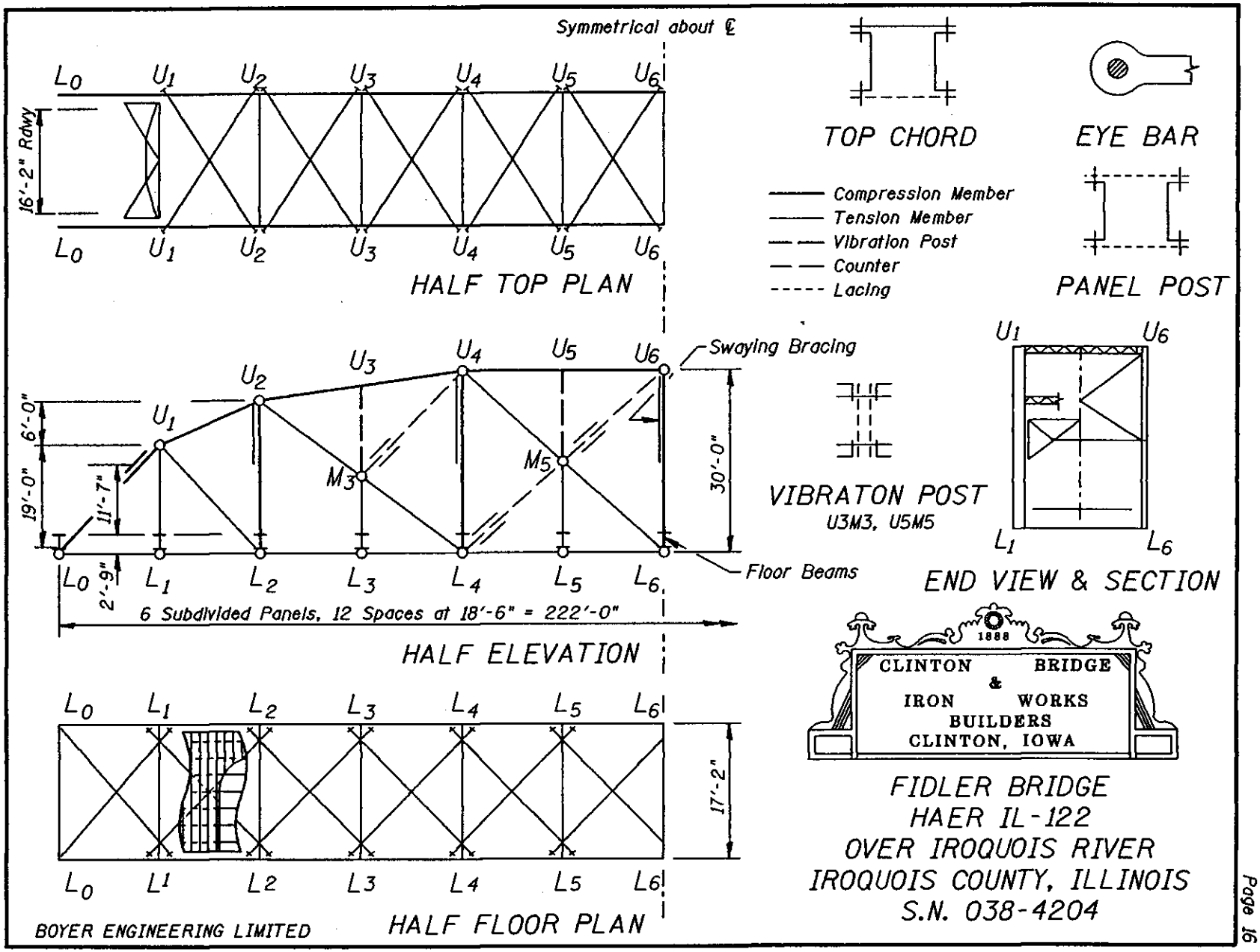
August 3, 1995




Symmetrical about ℄
L0 U1 U2 U3 U4 U5 U6
16'-2" Rdwy
HALF TOP PLAN
TOP CHORD
EYE BAR
Compression Member
Tension Member
Vibration Post
Counter
Lacing
PANEL POST
Swaying Bracing
6'-0"
19'-0"
11'-7"
2'-9"
30'-0"
M3
M5
Floor Beams
6 Subdivided Panels, 12 Spaces at 18'-6" = 222'-0"
HALF ELEVATION
VIBRATON POST
U3M3, U5M5
L1 L6
END VIEW & SECTION
17'-2"
HALF FLOOR PLAN
1888
CLINTON BRIDGE & IRON WORKS
BUILDERS
CLINTON, IOWA
FIDLER BRIDGE
HAER IL-122
OVER IROQUOIS RIVER
IROQUOIS COUNTY, ILLINOIS
S.N. 038-4204
BOYER ENGINEERING LIMITED